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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,710	01/16/2004	Martin W. Rupich	02802.174 US1 AMSC-676	6546

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WILMERHALE/BOSTON
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BOSTON, MA 02109

EXAMINER	
WARTALOWICZ, PAUL A	

ART UNIT	PAPER NUMBER
1793	

NOTIFICATION DATE	DELIVERY MODE
03/19/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/758,710	RUPICH ET AL.	
	Examiner	Art Unit	
	Paul A. Wartalowicz	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) *19-50* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 4/3/06
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

The restriction has been modified to include group I drawn to a method of making a film including a dopant metal, and group II drawn to a method of making a film including a secondary phase forming additive. However, it appears that claims 19 and 20 are drawn to a method of making a film including a secondary phase forming additive. Therefore, the claims being examined are claims 1-18. All other claims have been withdrawn from consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 4-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riley et al. (WO 01/08169) in view of any one of Weinstein (U.S. 6525002) and Babu et al. (New chemically stable...).

Riley et al. teach a process of disposing a precursor solution onto a biaxially textured substrate (page 7) to form a precursor film wherein the precursor components comprise an organic solution of metal trifluoroacetates prepared from powders of salts of barium, yttrium, and copper wherein after application, the precursor is heat treated to a temperature of 300-500°C (page 19) at a rate of at least 5°C per minute (page 22) wherein the intermediate film is heated at a temperature of 700-825°C in the claimed environment (page 22).

Riley et al. fail to teach that a dopant comprising a metal compound is in the precursor solution that is capable of replacing one or more of the rare earth and alkaline earth metal of the rare-earth/alkaline-earth/transition metal oxide.

Weinstein, however, teach a process for making superconductors (col. 1) wherein the precursor superconducting material includes a metallic compound suitable for forming of pinning sites (col. 5-6).

Babu et al. teach a process for making superconductors (page L44) wherein precursor salts are mixed with an additive, thoroughly mixed and then calcined to provide nano-sized pinning centers (page L44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide the precursor superconducting material

includes a metallic compound (Weinstein, col. 5-6) (Babu et al., page L44) in Riley et al. in order to form pinning sites as taught by either Weinstein or Babu et al.

Regarding claims 4 and 5, Weinstein teach that the amount of the additive is 2 ppm to 6%. This appears to meet the instantly claimed limitations.

Regarding claim 18, the prior art teach a substantially similar process as that instantly claimed such that the properties resulting from the prior art process are substantially similar to those instantly claimed, including orientation.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riley et al. (WO 01/08169) in view of any one of Weinstein (U.S. 6525002) and Babu et al. (New chemically stable...) and Jin et al. (Superconducting properties of...).

Riley teaches a method of making a superconductor as described above.

Riley fails to teach the instantly claimed amount of dopant.

Jin et al., however, teach a method of making superconductors (page 75) wherein 20% of rare earth elements are substituted with additional elements (page 76) for the purpose of raising the Jc (page 78).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide substitution of 20% of rare earth elements with additional elements (page 76) in Riley et al. in order to raise the Jc (page 78) as taught by Jin et al.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Riley et al. (WO 01/08169) in view of any one of Weinstein (U.S. 6525002) and Babu et al. (New chemically stable...) and Feenstra et al. (U.S. 5972847).

Riley et al. teach a process for making a superconductor as described above.

Riley et al. fail to teach that the oxide superconductor is biaxially oriented and that the oxide superconductor has a c-axis orientation that is substantially constant across its width, the c-axis orientation of the oxide superconductor being substantially perpendicular to the surface of the substrate.

Feenstra et al. teach a method for making superconductors (col. 1) wherein it is known that biaxial texture is required to obtain high transport critical current densities (col. 1). Also taught is that the most favorable YBCO orientation is with c-axis perpendicular to the substrate (col. 4).

Riley et al. teach that a-axis oriented grains should be minimized (page 27).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide biaxial textured superconductors and c-axis perpendicular to the substrate in Riley et al. for the purpose of obtaining high transport critical current densities the most favorable YBCO orientation is with c-axis perpendicular to the substrate as taught by Feenstra et al. Additionally, one would be motivated to provide c-axis orientation constant as Riley et al. teach that a-axis oriented grains should be minimized.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Wartalowicz whose telephone number is (571) 272-5957. The examiner can normally be reached on 8:30-6 M-Th and 8:30-5 on Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Paul Wartalowicz
January 13, 2008

/Steven Bos/
Steven Bos
Primary Examiner
A.U. 1793